

Remarks

Claims 53-75 and 77-81 are currently pending. Claim 76 has been previously cancelled. Claim 80 has been amended to correct a typographical error. Applicants assert that all claims are in condition for allowance as set forth more fully below.

Interview Summary

A telephone interview with the Examiner was conducted on September 22, 2006. During the interview, the Examiner's interpretation of both the Ramsier and Bork references were discussed.

In regards to Ramsier, Applicants pointed out that the reference did not disclose a voltage converter and that examiner merely asserted that one must exist somewhere in the charger described by Ramsier. It was further pointed out that Ramsier describes that the battery was charged by varying a charging current and not a voltage. The Examiner concurred with Applicant's analysis and indicated that Applicant's assertions would overcome Ramsier.

In regards to Bork, Applicants then pointed out that the USB controller 46 did not control the voltage output of the voltage regulator but merely floated a DC data signal on top of the voltage regulator's output. Therefore the regulator was not regulating the output voltage to the battery. The examiner concurred with applicant's analysis and indicated that Bork also would be overcome. The Examiner requested that such arguments and any amendments be submitted in writing.

102 Rejections

Claims 53-57, 59, 60-62, 75, 77 and 78 stand rejected under 35 USC 102(b) as being anticipated by Ramsier (US Pat. 5,844,400). Claims 66-68, 70-73 and 75-81 stand rejected under 35 USC 102(e) as being anticipated by Bork (US Pat 6,633,932). Applicants respectfully traverse these rejections

Claims 53-57, 59, 60-62, 75, 77 and 78

Independent claims 53 and 75 recite similar claim elements. As a representative sample, independent claim 53 recites:

“A portable battery recharge station comprising:
a supervisory circuit associated with a voltage requirement of a secondary battery;
and
a voltage converter in communication with the supervisory circuit,
wherein when the secondary battery is in contact with the supervisory circuit, the
supervisory circuit instructs the voltage converter to supply a voltage to the secondary
battery in accordance with the voltage requirement.”

The Office Action rejects independent claims 53 and 75 by stating that Ramsier teaches all of the claimed elements. In its rejection, the Office Action is equating unit **200** (a digital processor) in Fig. 4 of Ramsier to the supervisory circuit of claims 53 and 75. The Office Action then asserts that processor **200** is associated with a voltage requirement of a secondary battery (which must be Battery **180/266** of Figs. 3 and Fig 5, respectively) implying that different batteries types require different voltages. The Office Action continues on to assert that processor **200** then instructs a voltage converter to supply the appropriate voltage to the battery **180/266**.

The Applicants point out, and the Office Action itself concedes, that Ramsier does not disclose the existence of a voltage converter, instead the Office Action makes a leap of logic that a voltage converter must exist somewhere in the “charger”. The Office Action also leaves the identity of the “charger” unidentified, however, Applicants assume charging circuit **220** was the intended component in Ramsier. To anticipate a claim, the reference must teach every element of the claim in as complete detail as is contained in the claim. MPEP 2131.01.

Therefore, even if the Office Action is implicitly or inherently equating the “charger” to the Charging Circuit **220**, the Applicants point out that Ramsier explicitly states that Charging Circuit **220** applies the appropriate amount of power to the batteries **180** by applying and varying the charging *current*, not a voltage. (Col. 10, l. 64-66). Therefore Ramsier does not disclose the asserted voltage converter subject matter. Further, by teaching the use of a charging current and its variation, Ramsier is actually teaching away from the claimed subject matter. Therefore there would be also no motivation to use Ramsier as a reference for the teaching of a voltage converter.

As such, Ramsier fails to expressly or inherently disclose a “voltage converter in communication with the supervisory circuit” and that the “voltage converter [is] to supply

a voltage to the secondary battery in accordance with the voltage requirement”. Therefore Ramsier fails to anticipate all of the elements of independent claims 53 and 75 for at least these reasons.

Further, Ramsier also fails to disclose either of “a supervisory circuit associated with a voltage requirement of a secondary battery” or a supervisory circuit that “instructs the voltage converter to supply a voltage to the secondary battery in accordance with the voltage requirement [of a secondary battery]”. Ramsier states that Processor **200** senses whether a mobile terminal is or is not docked, whether the mobile terminal is “on” or “off” and whether the battery is Li-Ion or Ni-Cd by determining if a physical switch is open or closed in the battery pack. Processor **200** recognizes these factors by sensing a decrease in a +5v pull down voltage in sensing line **186b**. The pull down voltage is provided by the cradle power supply **208** and not by the secondary battery. (Col. 7, l. 63-66). Therefore, the +5v pull down voltage and its alteration is not a voltage requirement of a secondary battery or a measurement of a voltage requirement. It is merely a proxy for the type of the battery in the charger and whether the device is on or off. As such, processor **200** is not a “supervisory circuit [that] instructs the voltage converter¹ to supply a voltage to the secondary battery in accordance with the voltage requirement [of a secondary battery]”. As discussed above, Ramsier does not disclose a voltage converter. Also the pull down voltage is not a voltage requirement of a battery. Even Figure 7 of Ramsier showing a look up table associated with the pull down voltage does not disclose a voltage requirement of a battery. Ramsier’s disclosure is merely the closing of three physical switches that change the charging current and has nothing to do with a battery voltage requirement. Therefore, Ramsier also fails to teach these additional claim elements.

As such, independent claims 53 and 75 are allowable over Ramsier for at least these reasons. Dependent claims 54-57, 59, 60-62, and 77-81 depend from an allowable independent claim 53 or 75 and are allowable for at least these same reasons.

¹ See above. There is no voltage converter disclosed in Ramsier.

Claims 66-68, 70-73 and 75-81

The Office Action rejects independent claims 66 and 75 by stating that Bork teaches all of the elements. Independent claims 66 and 75 recite similar elements. As a representative sample, independent claim 66 recites, in pertinent part:

“A battery charging system comprising...a portable battery recharge station having a voltage converter and a supervisory circuit...the supervisory circuit determines a voltage requirement of the secondary battery, and the supervisory circuit then instructs the voltage converter to supply a voltage to the secondary battery in accordance with the voltage requirement.”

The Office Action neglects to indicate what component in Bork the examiner believes corresponds to the claimed voltage regulator and to the supervisory circuit. However, the Office Action appears to equate units **46** (a USB Function Controller), **52** (+ data line), and **54** (- data line) of FIG. 14 of Bork to the supervisory circuit of claims 66 and 75.

If so, Applicants note that Bork describes utilizing the USB Function Controller **46** to merely float Data D+ and D- onto the constant 3.7v, 370 ma power being supplied to the battery of the cellular phone. Since Bork describes that the cell phone itself determines its own charging power requirements, Bork is not concerned with using a supervisory circuit that determines a voltage requirement of the secondary battery then instructing the voltage converter to supply a voltage to the secondary battery in accordance with the battery's voltage requirement.

It also appears that the Office Action is equating regulator **44** to the claimed voltage converter supply[ing] a voltage to the secondary battery. However, Applicants point out that Bork teaches a fixed +4.5V voltage being output from the PC power source **26** as being the proper voltage to supply to the voltage regulator **44**. (Col. 6, l. 26-30; Col. 7, l. 17-24). Bork then utilizes the voltage regulator **44** to provide a constant +3.7 v, 370 ma power to the cell phone which actually controls its own power requirements. (Figs 14 and 19, Col. 4, l. 41-43; Col. 7, l. 66-67). As such, regulator **44** does not determine a voltage requirement of the secondary battery with the supervisory circuit and then instruct the voltage converter to supply a voltage to the secondary battery in accordance with the voltage requirement. The regulator **44** reduces the +4.5V DC power from the

PC to +3.7 v (Figs 14 and 19) and may float the data signal from the USB Function Controller onto the +3.7v power being fed to the cell phone battery 14. (Fig. 14, 19). The USB Function Controller is not in communication with the cell phone battery and can not control the regulator voltage output based on the cell phone battery requirements and therefore cannot be equated to the supervisory circuit of claims 66 and 75 for this reason.

Because Bork does not teach a supervisory circuit that determines a voltage requirement of the secondary battery then instructs the voltage converter to supply a voltage to the secondary battery in accordance with the voltage requirement, Bork fails to teach all of the elements of the claims. As such, independent claims 66 and 75 are allowable over Bork for at least these reasons. Dependent claims 67-74 and 76-81 depend from an allowable independent claim 66 or 75 and are allowable for at least these same reasons.

Claims 79-81

Dependent claims 79-81 each recite similar elements. As a representative example claim 79 recites, in pertinent part, “the programming resistor is associated with a device specific charging cord”. As to claims 79-80, neither Bork nor Ramsier disclose that a programming resistor is associated with a device specific charging cord. Further, claim 80 recites, in pertinent part, that “the supervisory circuit determines the voltage requirement of the secondary battery based on the resistance value of the programming resistor”. Further still, claim 81 recites, in pertinent part, that the voltage requirement is determined based on the charging cord. Neither Bork nor Ramsier disclose a voltage requirement based on the resistance value of a programming resistor associated with the charging cord or that the voltage requirement is determined by the charging cord itself. As such, since neither Bork nor Ramsier disclose all of the elements of claims 79-81, claims 79-81 are allowable over both Bork and Ramsier for at least these additional reasons.

103 Rejections

The Office action indicates that Claims 58, 63-65, 69 and 74 stand rejected under 35 USC 103(a) as being unpatentable over the combination of Bork or Ramsier.

Applicants believe that there is a typographical error and that the Office Action intends to say Bork **and** Ramsier. In any event, Applicants respectfully traverse these rejections.

At least for the reasons given above with regard to the §102 rejections, independent claims 53 and 75 are allowable over Ramsier, and claim 66 is allowable over Bork. Since claims 58, 63-65, 69 and 74 depend from either claim 53, 66 or 75 and recite additional features, claims 58, 63-65, 69 and 74 are allowable over Bork and Ramsier as well as the combination of Bork and Ramsier.

Conclusion

Applicants assert that the application including claims 53-75 and 77-82 is now in condition for allowance. Applicants request reconsideration in view of the amendments and remarks above and further request that a Notice of Allowability be provided. Should the Examiner have any questions, please contact the undersigned.

No fees are believed due. However, please charge any additional fees or credit any overpayment to Deposit Account No. 50-3025.

Respectfully submitted,

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